

PROCEEDINGS OF THE CLUB

FEBRUARY 8, 1910

This meeting was held at the American Museum of Natural History. Dr. William Mansfield occupied the chair. Seventeen people were present.

The minutes of the last meeting, January 26, were read and approved.

The special committee for securing funds for the Tuesday evening lectures made a report.

Resignations were read and accepted from Miss Nellie P. Hewins and Mrs. Jane Condit Robison. The scientific paper of the evening was by Dr. P. A. Rydberg on "Flora of the Arctic Regions."

It was well illustrated by numerous mounted specimens collected on the later Peary expeditions.

The following abstract has been prepared by Dr. Rydberg :

"The two collections exhibited were made by Dr. Goodsell in 1908-9 and by Dr. Wolf in 1905-6, partly on Greenland, partly on Ellesmere Land, and partly in Labrador. As the last-mentioned locality belongs to the subarctic rather than the arctic regions, the plants from there were merely shown, but no description of the flora was given. It contained one new species of umbellifers of which Dr. Rose of the U. S. National Museum has furnished a description.

"A general description of Greenland and Ellesmere Land was given. Greenland is an immense ice-covered plateau, rising on the east side to 10,000-11,000 feet and on the west side to 5,400 feet. Only a narrow strip along the coast and the small islands outside become bare in the summer, and here the meager flora is found. Ellesmere Land is lower. There is no continuous inland ice, although smaller icefields, snow-covered mountains, and glaciers are found.

"In accounts of the flora of Greenland and Ellesmere Land, one seldom finds any references to the altitude at which certain plants grow. There seems to be no difference between the flora at sea-level and that at an altitude of two thousand feet; the luxuriance

or meagerness of the flora depends wholly on soil and water-supply.

“ A comparison was made between the flora of these regions and of the Scandinavian peninsula at the same distance from the pole. At a latitude at which the hardwood forests grow in Sweden, there is found in Greenland only one tree, a small birch, *Betula odorata tortuosa*; and dwarf undershrubs are the only representatives of the woody flora at the same latitude as that in which we find pine and spruce forests in Scandinavia.

“ At the Danish colonies, all south of Lat. 72° , no grains or fruit can be grown, only a few vegetables, as green cabbage, lettuce, turnips, and parsley. None of them grow as far north as Etah. The only native plants that can be used as food at this latitude are the following: the crowberry, *Empetrum nigrum*, and a blueberry, *Vaccinium uliginosum microphyllum*, of which the fruit is eaten; a stone-crop, *Rhodiola rosea*, and the mountain sorrel, *Oxyria digyna*, of which rootstock and leaves are used; and two scurvy-grasses, *Cochlearia groenlandica* and *C. fenestrata*, the foliage of which is used for food and as a remedy against scurvy.

“ The woody plants of Greenland, north of Lat. 72° , consist of small undershrubs: a dwarf birch, *Betula flabellifolia*; three willows, *Salix groenlandica*, *S. anglorum*, and *S. herbacea*; the crowberry and blueberry, mentioned above; *Cassiope tetragona*; and *Diapensia lapponica*. A few degrees south of Etah the following are added: *Phyllodoce coerulea*, *Andromeda polifolia*, *Cassiope hypnoides*, *Chamaecistus procumbens*, *Rhododendron lapponicum*, and *Ledum decumbens*, all of the heath family. The woody vegetation of Ellesmere Land consists of two willows, the small blueberry, the crowberry, *Diapensia lapponica*, and *Cassiope tetragona*.

“ The flora of northern Greenland (north of Lat. 72°) and Ellesmere Land numbers about 150 species of phanerogams. Of these not more than 100 are found as far north as Etah. Three fifths of the plants are circumpolar, more than one fifth are common to the region and Arctic America, and the remaining fifth or less are endemic plants or else plants of European origin, that is, also common to Iceland or Spitzbergen.

“Outside of the grasses, sedges, and rushes (together about 40 species), there are no monocotyledons in Ellesmere Land and only *Tofieldia palustris* in northern Greenland. The rest are dicotyledons, representing 26 families.

“Nearly all the plants are perennials. The herbs are mostly densely tufted plants with thick rootstocks; these grow in the gravel-beds and among rocks. The plants of the moister and richer soils have usually more slender and creeping rootstocks. The only annuals, as far as the speaker knew, were the two species of scurvy-grass.

“The collections made by Dr. Goodsell and by Dr. Wolf numbered together 60 species. Some of the species were duplicated by specimens from different localities. A few other Greenland and Ellesmere Land plants, not in these collections, were also exhibited in order to give a fairer idea of the flora of the region. Some species were represented also by specimens collected in the Rocky Mountains, in northern Europe, or northeastern America, to show how the same plants grow under more favorable conditions.”

The meeting adjourned at 10.25 P. M.

JEAN BROADHURST,
Secretary pro tem.

FEBRUARY 23, 1910

This meeting was held in the morphological laboratory of the Museum of the New York Botanical Garden at 3:30 P. M. Seventeen persons were present. Dr. William A. Murrill presided.

Mr. Sereno Stetson, 507 West 113th Street, New York City, was nominated for membership.

The first part of the announced program consisted of an “Informal Report on a Collecting Expedition to Panama” by Dr. Marshall A. Howe. The period between December 5, 1909, and January 12, 1910, was devoted to botanical explorations in the Canal Zone and vicinity. The special object of the visit was to collect and study the marine algae of the region, but the marine

algae proving rather unexpectedly infrequent, especially on the Pacific shores of the Isthmus, there was considerable opportunity for turning attention to the land flora, particularly the fungi, Hepaticæ, Musci, etc., and for securing photographs of general botanical interest. The speaker exhibited many specimens and also numerous photographs, illustrating the floral aspects of the region and details of certain selected plants. A marine flora, in the more popular sense of the word, seems to be almost non-existent in the Bay of Panama, or at least in the parts of it that were examined. There are, however, a few closely incrusting species of such genera as *Ralfsia* and *Hildenbrandtia* and of the families Squamariaceæ and Corallinaceæ, and there are representatives of the Cyanophyceæ and of such genera as *Enteromorpha*, *Chaetomorpha*, *Bostrychia*, *Caloglossa*, *Catenella*, *Lophosiphonia*, *Herposiphonia*, and a few other rather small and inconspicuous kinds. Not a fragment of an alga or of any marine seed-plant was found washed ashore at any part of the Bay of Panama that was examined. The cause of the paucity of marine plant life in this region is not wholly obvious, but is probably to be found in the combination of wide-ranging tides with tropical conditions as to light and heat. The scorching effect of the direct rays of the tropical sun is of course unfavorable to any luxuriant development of the algae between the tide-lines, and at and below the low-water mark the fluctuations in water-pressure and light-intensity seem here in some way to act unfavorably upon plant-life. At least, on the Atlantic or Caribbean side of the Isthmus, only fifty miles to the northward, where the conditions are apparently similar except that the tides are much lighter, there is a fairly well-developed and diversified marine flora, in striking contrast to that of the Bay of Panama. On the Pacific side, in the Bay of Panama, the tides have a maximum vertical range of from ten to nineteen feet; at Colon, on the Atlantic or Caribbean side, the range is commonly less than two feet. About three weeks were devoted to making collections at Colon and vicinity, with more satisfactory results so far as the algae were concerned. A more detailed account of the expedition appears in the *Journal of the New York Botanical Garden* for February.

The second paper on the program was by Dr. W. A. Merrill and was entitled "Collecting in Mexico." This paper, an abstract of which follows, was illustrated by numerous photographs taken by the speaker.

"The special object of the expedition to southern Mexico was to secure specimens, descriptive notes, and colored drawings of the fleshy and woody fungi. Collections were made in eight different localities, 3,300 specimens of fungi being obtained, 120 of which are represented by colored drawings.

"The first stop was made at Jalapa, at an elevation of 5,000 feet, in the moist region of the eastern slope. About a week was spent there, searching the dense virgin forests for fungi. A number of medicinal plants, such as jalap and sarsaparilla, were formerly exported from these forests in large quantities. Ferns, mosses, liverworts, and lichens are abundant in the woods and on the lava walls along the roads and in the fields.

"The next principal stop was at Cuernavaca, where we collected in the barrancas and gardens from the village of San Antonio to Chapultepec. An excursion was also made on horseback to the Tepeite Valley, on the southern side of Ajusco at an elevation of 7,000 feet. This region was moist and very rich in fungi, as well as in mosses and epiphytes.

"A short stop was made in Mexico City in order to visit the famous tree of "*la noche triste*" and the magnificent grove of ahuehetes (*Taxodium mucronatum*) adjoining the castle of Chapultepec.

"From Mexico City, we went direct to Colima, on the western coast, a journey of 24 hours by rail. We found the climate there too dry for fleshy fungi, but obtained a number of woody species. Specimens of the interesting *candeiilla*, or wax-plant, which grows in the barrancas about Colima, were obtained from Monsieur A. Le Harivel. The wax obtained from this plant is coming into use in New York City for phonographic records.

"The only considerable journey made from Colima as a base was to Tecoman and the west side of the valley of the Armeria River, where the elevation is only one or two hundred feet above sea-level. The dense tropical jungle along this river was examined

for several miles and many interesting specimens obtained. On the return journey, the buried city of San Juan Teotihuacan, thirty-two miles northeast of Mexico City, was visited, together with the maguey plantations and cactus thickets so abundant in the vicinity.

“Orizaba, at 4,000 feet elevation among the mountains of the eastern slope, was our next collecting base, and here the ravines and coffee plantations yielded many interesting specimens. The weather, however, remained a little too cool for some forms of fungi, and it was decided to seek lower elevations while the rains continued. Accordingly, we went to Cordoba and from there south to Motzorongo, 800 feet above sea-level, where the conditions were ideal. Another trip was taken to Xuchiles, between Motzorongo and Cordoba, and collections were made in the coffee and banana plantations of the Rio Blanco. This whole region about Cordoba is of great botanical interest and is easily accessible by railways running in four different directions.

“A full descriptive account of this expedition, illustrated with original photographs, will be published in the *Journal of the New York Botanical Garden* for March.”

Adjournment followed.

MARSHALL A. HOWE,
Secretary pro tem.

OF INTEREST TO TEACHERS

SCIENCE TEACHING

The address of Professor John Dewey, before Section L of the American Association for the Advancement of Science at Boston is reprinted in *Science* for January 28, 1910. The gap between “scientific specialists and those who are interested in science on account of its significance in life” is mentioned, and attention is called to the fact that those interested in “securing for the sciences the place that belongs to them in education feel a certain amount of disappointment at the results hitherto attained.” The one great cause suggested for this failure is thought to be that science is “taught too much as an accumulation of ready-made